

Digital inclusion and literacy in Parkinson's disease

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Introduction: COVID-19 pandemic has boosted the use of telemedicine [1,2,3]. However, this has highlighted the presence of a “digital divide” between those who can or cannot access and use digital devices, further spurring government strategies to implement higher “digital inclusion”. Although literature suggests Parkinson's disease (PD) patients are leaning to this transition [4], no study ever assessed their level of digital inclusion.

Objectives: (1) To compare digital inclusion and literacy in PD-patients and controls and (2) to determine the influence of clinical factors on digital inclusion.

Methods: A modified version of the Internet Skills Scale (ISS) evaluating three main domains (operational, information navigation, and mobile) [5] was administered to PD patients from five Italian centers. Clinical (MDS-UPDRS-III [6], Hoehn & Yahr [7], presence of depression and cognitive decline) and demographic informations (age, sex, education, job status, family income, housing context) were concomitantly registered.

We used Mann-Whitney U-Test for group-differences and linear regression model to determine the predictive value of age-corrected MDS-UPDRSIII and HY on ISS score.

Results: 270 PD patients and 49 matched controls were enrolled; no significant differences were found regarding age, sex and ISS global score. Significant differences emerged in the “Information Navigation” domain ($p=0,006$).

In PD, possible/mild cognitive decline was associated with worse ISS performance ($p=0,035$) and fewer Information Navigation ($p=0,025$) and Operational ($p=0,035$) skills. No significant differences were found comparing patients divided by presence of depression/apathy.

Age-corrected MDS-UPDRSIII and H&Y predicted ISS-score (for both $p<0.001$).

Conclusions: Although digital skills are not reduced in PD in general, patients perform worse in the Information Navigation subdomain, possibly due to cognitive dysfunction. Their digital performances however worsen with increasing disease severity, which would hamper the use of telemedicine when more needed.

References:

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